



TCDD Carcinogenicity in Humans

In volume 99 of *EHP*, Johnson gives his views of tetrachlorodibenzo-*p*-dioxin (TCDD) carcinogenicity in humans (1). The same topic was covered one year earlier by the same author in another journal (2). In regard to our studies (3–9), Johnson unfortunately repeats some misinterpretations of our results in both papers. I already commented on one of Johnson's earlier papers (2,10), so it seems necessary for me to again give a response.

To demonstrate that our results were seriously influenced by interviewer bias, Johnson (1,2) uses data on our studies published by the Royal Commission on the Use and Effects of Chemical Agents on Australian Personnel in Vietnam (11). This part of the report was almost entirely a verbatim incorporation of a submission to the Royal Commission by Monsanto Australia Ltd, a producer of chlorinated phenols (12). In regard to our studies, the submission was in error on several points, and consequently the commission's report was in error, as concluded by the Department of Veterans Affairs in Australia (13). We have published details on this elsewhere (14–18).

Thus, Johnson states that the risks for soft tissue sarcoma and malignant lymphoma for exposure to phenoxy compounds were 2.6 and 3.0, respectively, using questionnaire data only, and states that these risks increased to 5.3 and 4.8 after interviews (1). However, these figures represent different criteria for exposure; i.e., a minimum exposure of 1 day and a latency period of at least 5 years were used in the calculations using exposure data after supplementary phone interviews. If the same exposure criteria were used in all these calculations, the risks would have been 4.2 for soft tissue sarcoma and 4.1 for malignant lymphoma based on questionnaire data before the interviews (quite different from the results presented by Johnson, and comparable with results after interviews). These results were initially presented in one of my early publications on this topic (19).

This forum does not allow me to comment on all aspects of our studies reported by Johnson. Let me just add that contrary to Johnson's statement (1), we did assess exposure to all types of pesticides, including arsenicals and creosote. Details have been presented in our papers on this topic. It is necessary in science that different viewpoints be discussed and freely

communicated, but the debate should be based on originally published data.

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Response

As Hardell mentioned in his letter, he previously raised exactly the same issue (1) about possible misrepresentation of data derived from tables in two of his publications (2,3) in two of my review articles on TCDD (4,5). I previously addressed the issue he raised (6) and pointed out quite clearly that the misunderstanding over these tables arose from inconsistency in the manner he labeled the tables (4).

I am puzzled over why Hardell persists in bringing up the subject again when it has been adequately dealt with. I am even more astonished that Hardell, in his current letter to *EHP*, should continue to mislead the reader by saying “. . . Johnson uses data on our studies published by the Royal Commission on the Use and Effects of Chemical Agents on Australian Personnel in Vietnam,” even though I clearly stated that I used only data he presented in his publications in peer-reviewed journals (6: 340): “At issue was a comparison I made between data in Table 1 in one of his papers, and in Table IV of another. . . . I believe therefore that my account of the Hardell studies was objective and fair, and based entirely on the information available in peer-reviewed scientific journals.” I cannot understand why Hardell should deliberately distort the facts regarding the source of his data which I used. Similarly, I cannot understand why Hardell should give the reader the impression that he had previously provided data specifically on arsenicals and creosote, when none of his publications in peer-reviewed journals showed this. It should be noted that Hardell omitted references for his publications purporting to provide information on these two chemicals. My only response to his current letter is to refer readers to my previous response (6).

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